

Claims

1. Wind energy unit (WKA) connected to an electrical 3-phase AC network comprising a generator with a rotor to which a regulation device is assigned, characterized in that the

5 regulation device features a first and a second regulation unit, whereby a network voltage analyzer is connected to the electrical 3-phase AC network through which a network fault can be determined, said network fault being defined as a deviation of the network voltage sinor representation from a  
10 predetermined set interval, and whereby through the second regulation unit in the case of a detected network fault the regulation can be taken over from the first regulation unit by the second regulation unit, while the first regulation unit is used for regulation with a non-faulty 3-phase AC  
15 network.

2. WKA as claimed in claim 1, in which a compensation unit is connected to the 3-phase AC network, through which a reactive power regulation is undertaken with a non-faulty 3-phase AC network to a desired reactive power component

20 determined by a basic oscillation shift factor.

3. WKA as claimed in claim 2, in which the reactive power regulation is undertaken exclusively by the compensation device and the first regulation unit is set for regulating a basic oscillation shift factor that cannot be changed during  
25 normal operation.

4. WKA as claimed in one of the previous claims, in which the generator is embodied as a doubly-fed asynchronous generator.

5. WKA as claimed in one of the previous claims, in which a  
30 commutator is provided which is connected to the first and

the second regulation unit and through which, in accordance with the network voltage analyzer specification, either the first or the second regulation unit can be activated.

6. WKA as claimed in one of the previous claims, in which parameters relating to the rotor current in the generator can be fed to the network voltage analyzer.
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7. WKA as claimed in one of the previous claims, in which parameters relating to the angular position and the speed of rotation of the rotor in the generator can be fed to the network voltage analyzer.
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8. WKA as claimed in one of the claims 1-4, in which the first and second regulation unit are implemented by one and the same physical unit and are embodied either as first or second regulation unit by operating this physical unit with different regulation programs.
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